Equality of Access to Enhancement Technology in a Posthumanist Society

José Luis Pérez Triviño
Law Department, Pompeu Fabra University, Barcelona
jose.perez@upf.edu

Igualdad de acceso a la mejora tecnológica en una sociedad posthumanista

Abstract: The possibility and justification of genetic manipulations (like other forms of enhancements, such as implants, prosthesis and transgenesis) leading to increase our human capabilities creates problems relating to human rights and equality in a future society. I analyze prohibitionist and favorable positions to enhancements implementation, but I try to show the feasibility of a third position taking as basis the Rawlsian ideas of primary goods and the difference principle that would allow in a first phase an open access to genetic enhancements. In a second step, given some circumstances, these enhancements could be considered as compulsory.

Keywords: human rights, enhancement, justice, equality

Resumen: La posibilidad y la justificación de las manipulaciones genéticas (como de otras formas de mejoras, tales como los implantes, prostesis y la transgénesis) que conduzcan a incrementar nuestras capacidades humanas genera problemas relativos a los derechos humanos y la igualdad en una sociedad futura. Analizo las posiciones prohibicionistas y las favorables a su implementacion, pero trato de mostrar la viabilidad de una tercera posición que tomando como pilares las ideas rawlsianas de los bienes primarios y el principio de diferencia permitiría en una primera fase el acceso (aunque fuera desigualitario) a las mejoras genéticas, y en una segunda etapa, dadas ciertas circunstancias, incluso se podría establecer su obligatoriedad.

Palabras-clave: derechos humanos, mejora, justicia, igualdad

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Introduction

The human desire to improve our physical, cognitive, and emotional qualities is a wide-spread and socially-accepted desire and the different methods used to achieve the desired effects on those qualities are not usually the subject of everyday discussion. Currently enhancements are available through surgery, implants, or pharmaceutical compounds which are perfectly accepted by society. For example, surgery, Botox, body modifications (piercing), or appetite suppressants are accepted for cosmetic purposes. In the field of music, it is perfectly acceptable to take a beta blocker like propranolol to counteract a musician's trembling before a concert. On a daily basis, there are different types of substances that enhance our cognitive abilities or mood including alcohol, nicotine, and caffeine; Ritalin, Modafinil and Prozac. There are even substances that can be bought over-the-counter to improve sexual performance as in the famous case of Viagra.

However, recent decades have seen more profound changes to the relationship between human beings and technology: the development of genetics,

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robotics, cybernetics, nanotechnology, and biomedicine is making it possible to envision a future in which human beings will be able to genetically modify and clone themselves; they will be able to create hybrid beings or interact with computers or other components from within the human body itself. Experts point out that it will be possible to undertake a diverse array of enhancement effects in the human body including physiological, cognitive, mood and even moral enhancements. In terms of physiological enhancements, the notions of improving speed, endurance, and height have been mentioned. Regarding cognitive enhancements, the consequences could be improving or extending our mental ability, enhancing our system for processing and organizing information (i.e. comprehension, memory, and perception). As regards mood enhancements, biomedicine intends to make us feel better, happier, and have a certain type of emotional response to a given situation. Lastly, emotional enhancements would involve individuals having a better ability to act, i.e. to be able to cause (at the mental or neural level) physiological moods or processes that make an individual act in a certain way.

A transhuman world in which human beings are not limited by the constraints imposed by Nature and in which they can undergo any kind of physical change aimed at improving their physiological or mental abilities, is for some a future promise that will enrich the potential of human beings. In contrast, for others – as in the Annas or Fukuyama case, it is deemed a most dangerous idea that lies in wait of humanity. These authors present a number of problems that advances to enhancement will bring about, including issues of health, autonomy, dehumanization, and finally the problem of inequality. Regarding this last issue, which will be the main focus of this paper, it has been pointed out that because enhancement will be within the reach of only a select few, there will be a significant increase in inequality.

Nevertheless, perhaps there are no grounds for such moral panic as long as these changes are not made obligatory, but are rather given to individuals with freedom of choice; in addition, they should be designed to enhance human abilities. In other words, they should produce individuals who are more intelligent and who have hopes for a life that is better than their current situation. This optimistic outlook, however, cannot conceal the fact that there will be obstacles in the process which will have to be overcome: access criteria will have to be established in order to respect equal opportunity and not just provide access to society's most favoured groups. Beyond that, measures will also have to be taken to prevent inequality in this future society

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between enhanced (post-human) beings and "normal" (simply human) beings. It has also been pointed out that transhumanism can lead to a slippery slope by experimenting with transformations on those most fragile and dangerous aspects of human nature (aggression, selfishness, etc.) which are far from being morally accepted. In contrast, Savulescu is of the opinion that this slippery slope will not necessarily be a concern; it is a process with a number of steps that may be controlled through medical and scientific advances so that undesirable results can be avoided. But in any case, one of the consequences of biotechnological enhancements in the short, medium, or long term will inevitably have an effect on our notions of human rights and equality between members of one single society.

Faced with these opposing points of view, the approach that I will present includes some variables that present the debate in a more complex way with conditional and temporary answers, although I will clearly position myself in support of those who promote technology for human enhancement. It is certain that all the types of enhancement that will be seen in the future could be of a very different type and scope: implants and prostheses, genetic and transgenic, nanotechnology and synthetic biology. It can also be pointed out with much certainty that almost every one of them should deserve individual and exhaustive treatment, especially because some of them, in addition to having effects on our physical abilities, also affect our cognitive and emotional ones.

In what follows, I will analyse normative matters: how should access to these technologies be dealt with and how would this affect equality among individuals. To do so, I will provide a classification of diverse theoretical positions that have dealt with these questions, going from absolute prohibition to claims for making them required, passing through several intermediate positions along the way. Next, I will go on to discuss one of the main problems faced by a favourable conception of human enhancement: the problem of inequality. Finally, I will lay out my belief which is based on two axes: 1) the connection between enhancements and primary goods in a Rawlsian sense; and 2) the temporary conditions regarding enhancements in such a way that in the first stage the Rawls' difference principle may be applied, while in the second stage, enhancements that affect primary goods could been seen as obligatory. Before getting started with this itinerary, I will deal with two matters that are, in my opinion, relevant as they will allow me to contextualize the problem and the answer that I will attempt to offer. In the first place, although several

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technologies exist that will improve human abilities, I will limit myself to examining genetic ones, and in this sense I will distinguish between two types of enhancement interventions: somatic and germ-line. Secondly, looking at the range of germ-line interventions, it is possible to distinguish between interventions that are therapeutic, interventions that improve the abilities within the normal average human range, and transhuman interventions. Since it is still hard to imagine that germ line and transhuman enhancements could exist, I will limit my analysis to somatic enhancements whose effects remain within the average range of human beings.

2. Normative Positions Regarding Genetic Enhancements

Since the start of the debate on genetic enhancements, theoretical-normative positions have been laid and refined. There are two primary veins to this important part of the discussion. The first has attempted to define in what situations these enhancements should be forbidden, allowed or required, either from a moral or legal point of view. It is obvious that arriving at these conclusions depends on the moral views surrounding enhancement. It is also possible to distinguish three positions: the first would consider enhancement to be morally wrong. The second would claim that enhancement is neither necessarily correct nor incorrect, and that, therefore, an intermediate or neutral position is appropriate. The third position would maintain that there are reasons to justify that genetic enhancement offers positive consequences to human beings, and that it is, therefore, correct. Given these points of view, this table allows us to see the main answers provided by experts in recent years.

	Wrong	Neutral	Correct
Forbidden	1		
Allowed	2	3	4
Required			5

The first case would be one that maintains enhancement is morally wrong and should not be legally allowed; The second case would be one which claims enhancement is morally wrong, but should be legally allowed; The third case would be one in which enhancement is morally neutral and should be legally allowed; The fourth case: enhancement is morally correct, but it should not be required by legal means (although it should be encouraged). That is to say, it should be allowed.

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The fifth case would be one in which enhancement is morally right and therefore, should be legally required.

With this framework, it is possible to classify core authors according to the framework above.

	Wrong	Neutral	Correct
Prohibited	Mehlmann, Fukuyama, Sandel		
Allowed		Nicholas Agar	Julian Savulescu
Required			John Harris

3. The problem of inequality

In recent years different opposing arguments to enhancement techniques have been put forward. In the same way, advocates of enhancement by means of biotechnology have countered these arguments with sharp replies. There is no doubt about the enormous advantages and benefits that these techniques can offer in curing and preventing diseases. In addition they can also offer the possibility of increasing productivity and satisfaction for individuals' life plans. Given these undeniable positive effects, supporters of transhumanism advocate that these technologies should be within the reach of individuals and that each individual should have the option to undergo them (Bostrom).

Nevertheless, as mentioned above, several serious objections have been raised to transhumanism: a) the problem of inequality; b) the problem of harm; c) the problem of autonomy, and d) the problem of dehumanization. But I will limit myself to analysing the first objection.

This critique highlights that physical enhancement would be so exaggerated that equality between normal individuals and enhanced beings would not exist given that enhanced beings, due to their enhanced status would enjoy greater social, economic and other opportunities. If, on the other hand, based on the assumption that the first individuals to have access to acquiring these enhancements would likely be individuals with greater economic resources, inequalities would then be even greater.

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In reality, this critique on some occasions seems to blur the lines between the range of enhancements, as previously explained, which could be within the range of the normal human average and those that go beyond it (posthumanist enhancements). As I mentioned before, each one of these enhancements must be differentiated and dealt with individually.

4. Enhancements within the Normal Human Average Range: Between Absolute Ban and *Laissez-faire Attitude*

In effect, some authors seem to fear that enhancements may produce great social inequality due to the fact that most cases would be within the posthumanist range. But as has already been highlighted, this is more of a caricature of what the impact of current biotechnology would be. Technology, or at least technology in its current state of development, has not advanced to a degree that would allow post-human individuals exist, i.e. ones with intelligence or abilities much beyond the normal human average range. Currently, biotechnology only offers a small difference. In any case, which decision should be taken in the future if these advances in physical or cognitive performance stop being within the normal range? What happens if they stretch into the transhuman range? Indeed, in this scenario, life conditions in society would be drastically different from those that we have been accustomed to up until now, and physiological changes would begin to appear much like those that can be seen in mutant X-Men. Moral norms (and social norms in general) have been based on a series of psychological, economic and social conditions that would substantially change.

Thus, within this enhancement scenario that remains within the limits of normal human averages, I believe that there are two positions at the core of the debate: the total ban and the *laissez-faire* attitude. In addition, the exception noted by John Harris in his defence of making enhancement required is also worth noting. However, I believe that there is space for a position that could anchor its main principle on the Rawlsian difference principle in such a way that a middle ground between *laissez faire* and obligatory enhancement could be found although there would be two distinct time periods included in this solution. In the first time period, the *laissez faire* attitude would rule, but in the latter time, obligation to comply with enhancement would be the governing principle.

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The position that advocates for a total ban on this type of enhancements is relatively weak if we take into account that in the current historical context other social arenas exist in which certain inequalities could also be considered unfair. Indeed, this is the case when a different batch of genetically inherited traits exists. The same can be said about privileged access to education due to parental wealth, or simply because of country of birth.

The *laissez-faire* position proposes that free access to these enhancements should be allowed, without any type of restrictions. Obviously, such a position seems to be grounded in a defence of personal autonomy in that each individual should have free access to these enhancements. In addition, faced with certain critical objections that enhancements can be desired by certain individuals for competitive reasons (Lema, 2012), there may actually be individuals who desire genetic enhancement for non-competitive reasons, but rather for reasons of personal development. Lastly, another argument in favour of a *laissez-faire* system is the market stimulus effect, i.e. as the product's price goes down, access to genetic enhancement is improved. If free access to genetic enhancement is allowed, it follows that something similar to what frequently happens with other products should take place. For example, after a short period of time computer, or other technological product, prices decrease significantly, thus making them accessible to all strata of society, not just for the most wealthy.

Nevertheless, this theoretical position is faced with a number of objections. Firstly, as was pointed out before, genetic enhancements would only be within the reach of the richest, and given that these enhancements provide a competitive advantage, the gap in equality would become greater still. Consequently, it would be a considerable detriment to those in the worst position as they are subject to unfair limits to opportunity.

In addition, the inequality that would be produced (or increased) by genetic enhancements could be harmful to future generations: those that benefit from this inequality could take power and as a result it could even be possible for them to destroy our liberal democratic society.

5. The Genetic Difference Principle

Faced with these two opposing and extreme conceptions, I believe that it is fitting to advocate for a third option which is founded on two central axes: 1) the distinction between different enhancement types according to their ties to Rawlsian primary

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goods (Allhof 2005), and 2) the temporary distinction based on the Rawlsian difference principle in such a way that there would be two stages, with each one being governed by a different set of norms.

5.1. The Distinction between Types of Enhancements

Allhof distinguishes between two types of enhancements: objective and subjective ones. The former would increase primary goods and therefore provide or improve conditions to exercise basic rights or liberties, like the freedom of movement, free choice of occupation, the freedom or prerogative of positions of responsibility in political and economic institutions which provide the basic framework, income and wealth, and the social foundation for self-respect. The latter, in contrast, would simply be subjective or neutral, such as those that affect beauty, eye colour or any trait that does not directly affect primary goods. The main characteristic that Rawls points out about primary goods is that all rational agents have an interest in those goods, independent of their conception of what that good actually consists of. If this is the case, as long as enhancements are instrumental with regard to those goods, then it would seem that there is no argument for banning them. Imagine that someone with a neurological treatment could enhance memory, or that some type of genetic procedure could improve physical endurance. Given that both results are *generally* appropriate or instrumentally valuable to better the chance of having a job, then they should be allowed for *any individual*.

5.2. The Temporary Condition

It seems clear nevertheless that genetic enhancements will not be available in such a way that all members of society will have access to them. But faced with extreme positions like the absolute prohibitionists or the *laissez-faire* attitude, there is an intermediate egalitarian position that makes a distinction between two periods of time in which enhancements would be treated in differently. In this way, during the first time period (T1), a variant of Rawls' difference principle would be applied to allow unequal access to genetic enhancements. However, this would be done in order to benefit the least advantaged. It is well known that Rawls' difference principle, which governs the distribution of socioeconomic inequality, maintains that inequality must be designed so that it works to the benefit of the most disadvantaged groups. Along

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the same lines, Lindsay proposes the *Genetic Difference Principle*. That being said, it is necessary to guarantee in this step that said subjects would not be able to abuse these powers in a malevolent way.

In contrast, at a later period in time (T2) when the *market stimulus effect* has likely rendered enhancement techniques more economically accessible to all individuals, these enhancements would be generally required, due to two factors above all others: 1) the connection between certain enhancements and primary goods; and 2) the principle of equality of opportunity, i.e. that charges and posts should be open to all under conditions of equal opportunity. In conclusion, I do believe that there will be reasons to justify generalized equal access to genetic enhancements that are linked to primary goods. In this sense, it may be possible to establish economic and social measures that guarantee conditions for equal access to enhancement technologies in an approach similar to the way in which the Welfare State provides education or healthcare. It seems to me that the justification would not be very different as long as physiological or cognitive enhancements contribute to individual well-being and autonomy as well as to the common good. Another aspect is how each individual takes advantage of these resources. Similar to what takes place in our current societies, some would take decisions and adopt life plans that are more successful than others.

6. Conclusions

In this paper, I have tried to demonstrate that the advances in biotechnology (including genetic engineering, implants and transgenics) may change the current panorama with regard to human rights and equality. The possibility exists that improvements to our physical, cognitive and emotional abilities, in this way, generate interesting notions to be contemplated in ethical and legal realms.

Although some of these changes to human beings still qualify as science fiction, it seems necessary to make arguments for and against biotechnological enhancements that foreshadow a drastic change in our individual and social make-up. Having analysed the principles that advocate for opposing advances to biotechnology and enhancement use such as those put forward primarily by "bioconservatives", I have attempted to contextualise and relativize the "moral panic" to which they appeal by

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highlighting four core objections: 1) the threat to equality; 2) the possibility of damaging health; 3) the effect on personal autonomy and 4) the threat of dehumanization. In my opinion, none of these objections is decisive enough to impede the development of biotechnological research; neither are they critical enough to stop these enhancements from being made accessible to all – once they can be carried out without any health risk, these enhancements can be applied without jeopardizing all those individuals who may wish to undergo them.

In response to the argument that genetic enhancements might increase the degree of inequality in society, I have attempted to show the feasibility of a normative position that breaks away from both absolute prohibition and the *laissez-faire* position while at the same time I look to the Rawlsian ideas of primary goods and the difference principle for support. Thus, in a first stage unequal access to enhancements that contribute to primary goods would be allowed, in this way avoiding great inequality. In a later second stage, the obligatory nature of some of these enhancements could be established, given their connection to human well-being.

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